

**AMENDMENT TO THE CLAIMS:**

The following claim set replaces all prior versions, and listings, of claims in the application:

1. – 14. (cancelled)
15. (currently amended) Process for forming an etched layer in a chip ~~comprises, in order by immersion lithography, the process comprising the sequential steps of:~~  
(A) forming a photoresist layer on a substrate wherein the photoresist layer is prepared from a photoresist composition comprising:
  - (a) a binder;
  - (b) a photoactive component; and
  - (c) ~~a fluor containing compound; the at least one dissolution inhibitor; the dissolution inhibitor comprising at least (i) two aromatic groups (ii) fluorine, and (iii) a (blocked) acid group which when unblocked has a pKa < 12~~  
(B) imagewise exposing a photoresist layer to form imaged and non-imaged areas,  
(C) developing the exposed photoresist layer having imaged and non- imaged areas to form the relief image on the substrate,  
(D) etching the substrate to a predetermined depth, ~~and~~  
(E) removing the relief image from the substrate.
16. (currently amended) A process for the production of a chip by ~~using~~ immersion lithography, comprising the step of forming a photoresist layer on a substrate, wherein the photoresist layer is prepared from a photoresist composition comprising:
  - (a) a binder;
  - (b) a photoactive component; and

- (c) a fluor containing compound.
- 17. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (c) a fluor containing compound having a (blocked) acid group, which when unblocked has a pKa < 12.
- 18. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (c) a fluor containing compound having two or more acid groups.
- 19. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (c) a fluor containing compound having an acid group with a pKa of 9.6 or less
- 20. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (c) a fluor containing compound having acid groups which are partly or fully blocked with acid-labile groups
- 21. (new) Process according to claim 20, wherein the photoresist composition comprises (c) a fluor containing compound having at least partly blocked acid-labile groups, chosen from the group consisting of A) a carbonate formed from a tertiary aliphatic alcohol, B) a tertiary aliphatic or other group which forms a stabilized carbocation, C) an acetal group and D) an orthoester group.
- 22. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (c) a fluor containing compound having aromatic groups.
- 23. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (a) 50 to 99.5 wt% of a polymeric binder
- 24. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (b) 0 to about 10 wt% photoactive compound

25. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises a binder, which is a polymer comprising acid groups with a pKa < 12
26. (new) Process according to claim 25, wherein the acid groups are partially blocked.
27. (new) Process according to claim 17 wherein the acid group is an hydroxyl group bound to an aromatic group, or a  $C(CF_3)_2OH$  bound to an aromatic ring.
28. (new) Process according to claim 17, wherein the acid group is at least partly blocked with a carbonate, acetal group, ortho ester, or tertiary alkyl group.
29. (new) Process according to claim 17, wherein the photoresist composition comprises (a) a binder comprising fluorine groups
30. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (a) a polymer with ring structures
31. (new) Process according to claim 15 or 16, wherein the process is performed at 193 nm.
32. (new) Process according to claim 15 or 16, wherein the photoresist composition comprises (a) an acrylic or methacrylic binder.